Department of Education
Federal Student Aid
Chief Information Office
Electronic Commerce Applications Development

QUALITY ASSURANCE HANDBOOK (FINAL)

Reporting Standards and Procedures

March 4, 2002

FOREWARD

BSC Systems, Inc. would like to thank those involved in the development of this document.

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EXECUTIVE SUMMARY

This revised handbook has been prepared for the Department of Education, Federal Student Aid organization (FSA). FSA has embarked upon an ambitious program to provide state-of-the-art information access to its user population: students, financial institutions, and financial professionals at learning institutions. Due to the extensive user demographics as well as the visibility of the program, FSA decided to impose the rigors of Independent Verification and Validation (IV&V) upon critical software application developments. As a pioneer Performance Based Organization, FSA desires to establish standards and criteria with which to measure the performance of its IV&V agents.

The first iteration of the QA Handbook was released last year and provided detailed standards and procedures for IV&V and IV&V related Security Assessments. This update reflects:

- Adoption by FSA of the Solution Life Cycle (SLC) development methodology
- A refining of IV&V "best practices" to the FSA environment
- An approach for "tailoring" IV&V approaches to reflect life cycle methodology, traditional versus accelerated development, centralized versus Internet development environments, and externally imposed constraints, such as budget limitations
- Standards and procedures to reflect renewed security awareness and address security effectiveness evaluations beyond the scope of traditional IV&V security evaluations

The IV&V approach presented in this handbook facilitates a team-building relationship between the developers and IV&V staff. The approach features open lines of communication and cooperation between the two groups while maintaining absolute independence and objectivity of and by the IV&V staff. This approach is facilitated through risk based monitoring of the targeted processes and products in a structured manner and features timely communications of findings to the development organization.

This handbook is structured to include standards and procedures for:

- Conducting IV&V Reviews
- Security Effectiveness Evaluations
- IV&V Reporting
- IV&V Performance Measures

Each of these standards and procedures has been combined into this Quality Assurance Handbook. The purpose of this handbook is to establish standards and procedures for conducting IV&V and assessing the information security of designated FSA systems under development and in production.

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LIST OF EXHIBITS

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5. INDEPENDENT VERIFICATION & VALIDATION REPORTING STANDARDS AND PROCEDURES

5.1 Introduction

These Independent Verification and Validation (IV&V) Reporting Standards and Procedures establish the reporting requirements necessary for the IV&V Team to fully document its activities for FSA target systems throughout their development and implementation. Execution of a plan that follows these guidelines will help to ensure that the IV&V Team can consistently provide a common reporting format for all FSA deliverables.

IV&V reporting will occur throughout the target Solution Life Cycle. The IV&V Team will document all IV&V results, which will constitute the specific report generated for each IV&V task. These IV&V reporting standards and procedures specify the content, format, and timing of all IV&V reports to be utilized for the FSA Modernization Program. These IV&V standards and procedures describe how results will be documented for implementing the IV&V Standards and Procedures described in Sections 2 and 3. All of the reports and checklists related to Security Effectiveness Evaluation are included in Section 4.

The IV&V process results in the reporting products discussed in this section being delivered on a regular, timely basis to FSA. This approach emphasizes building in quality up-front via a structured internal review process ensuring that each delivered product meets FSA quality standards. The key objective of these standards and procedures is to provide FSA with visibility into details of the development effort in a consistent format. For key deliverables, the actual plan and report templates are provided within these procedures. For other reports and memos only the recommended content is provided. In addition, different options are provided in the template based on what has been successfully used within FSA. The IV&V Team will perform walkthroughs of all key deliverables before they are delivered to the FSA Program Manager. Non-key deliverables will be reviewed by at least one other IV&V Team analyst as a quality review. The following procedures provide guidance for these activities.

5.1.1 Documentation Control

The IV&V Team will manage all documentation in accordance with ISO 9002 standards. The document files will be regularly reviewed and documents will be tracked by version. When it is necessary to keep multiple versions of a given document, the latest version will be marked accordingly and all of the latest document versions will be kept in the current files with the previous versions marked as archived. In addition, the IV&V Team will review all documents using the checklists included in Appendix A of the IV&V Standards and Procedures, and will maintain and track all document review comments. Comments will be tracked by a unique sequential number assigned by the IV&V Team. When an updated document is released, the document will be reviewed for incorporation of all outstanding comments and dispositioned. All current IV&V procedures and plans will be kept on file and all personnel will be familiar with the contents.

The IV&V Team will prepare a file for each document to include the following:

- Master copy of document
- Notes (e.g., walkthrough dates)
- Completed Checklist (if applicable)
- IV&V Findings (e.g., comments, technical report)
- Comment Responses
- Correspondence with FSA, developer, etc.

The IV&V Team will also maintain a document tracking log to include the following information:

- Document name
- Version and assigned tracking number
- Author of document
- Date received by IV&V Team
- Primary reviewer
- Internal comment walkthrough date
- Comment due date to FSA/developer
- Actual comment delivery date
- Comment resolution and date

The IV&V Team will utilize this tracking system to create an overall Document Review Schedule. An example of a Document Tracking Log and Document Review Schedule is included in Appendix C. The specific comment and walkthrough process is described in Sections 5.1.2 and 5.2.2.5.

The IV&V Team will maintain a Deliverable file for each report provided to FSA. This file will include the specific type of reporting template used for the IV&V activity, as well as a printout of the attached email to accompany each contract deliverable. The email will reference the specific attachments (e.g., Checklists), as well as the distribution of the deliverable.

5.1.2 Walkthroughs for FSA Deliverables

The implementation of effective quality control is critical to the success of any major IV&V effort. The IV&V Team will review and monitor the IV&V reporting process, including contract data requirements list items and delivered products, to ensure that the items satisfy all applicable contract requirements. The IV&V Team will institute a strict deliverable quality procedure where every deliverable is reviewed by at least one additional senior engineer before it is released.

This section details the reporting guidelines and activities required to conduct a formal product walkthrough. The IV&V Team will utilize the following approach in preparation of FSA contract deliverables:

- Plan and schedule the walkthrough
- Distribute the review materials
- Review the materials
- Conduct the walkthrough
- Document any defects and/or issues
- Resolve and verify the resolution of the defects and/or issues
- File the review materials

5.1.2.1 Planning the Walkthrough

The IV&V Team will schedule the internal walkthrough and prepare the required forms. The distribution of review materials must be provided early enough to ensure that there is adequate review time for the meeting participants.

5.1.2.2 Preparing the Meeting Notice

The IV&V Team moderator will prepare the Walkthrough Meeting Notice (Exhibit 5-1) by filling in Blocks #1 through #5. If the walkthrough is a follow-on to a previous walkthrough whose disposition was "Not Accepted," the previous walkthrough will be cross-referenced in Block #4. A sample meeting notice is provided in Appendix C.

The Walkthrough Log (Exhibit 5-2) will be used to record details of the walkthrough and obtain the next consecutive walkthrough number. The IV&V Team will complete columns 1 through 5 when planning the walkthrough. A sample walkthrough log is provided in Appendix C.

WALKTHROUGH MEETING NOTICE	
Product/IV&V Control Number: **[1]**	**Walkthrough Number:** **Date:** **Time:** **Place:**
Author(s): **[2]**	**[3]**
Reason for Walkthrough: ☐ New Development ☐ Change in Response to Problem Report ☐ Other (Specify): _____ ☐ Cross Referenced to: _____ **[4]**	
Review Team: **Moderator:** **[5]**	**Moderator:** Indicate who is present; note substitutes; mark-ups. **[6]**
Note: **If you are unable to attend the walkthrough, please review the handout materials and if you have any comments return them to the moderator prior to the walkthrough so they can be considered.** **Walkthrough Disposition:** ☐ Accepted ☐ Accepted With Modifications ☐ Not Accepted (Explain): **[7]**	
Effort Expended (optional): **[8]**	
Moderator's Signature: **[9]**	**Date:** **[10]**

WALKTHROUGH MEETING NOTICE

Exhibit 5-1

WALKTHROUGH LOG					
Walkthrough Number [1]	**Product [2]**	**Author [3]**	**Moderator [4]**	**Walkthrough Date [5]**	**Closure Date [6]**

WALKTHROUGH LOG

Exhibit 5-2

5.1.2.3 Distributing Review Materials

The completed Walkthrough Meeting Notice, the materials to be reviewed, and any supporting information will be copied and distributed to the moderator and reviewers. The moderator will receive copies of the Defect/Issue List (Exhibit 5-3) to document defects or issues found during the walkthrough. A sample defect issue list is provided in Appendix C. Any supporting documentation or other data that is included in the walkthrough package should be marked FYI, to distinguish it from the other material under review.

5.1.2.4 Reviewing the Materials

Materials distributed for the walkthrough will be reviewed by the participants prior to the meeting. Participants will arrange for a substitute reviewer or forward their review comments to the moderator prior to the walkthrough if they are unable to attend.

5.1.2.5 Performing the Walkthrough

The moderator will document walkthrough attendance on the Walkthrough Meeting Notice (Block #6) by recording the attendees' names or by use of a note indicating who did not attend. The moderator will also fill out the header information on the Defect/Issue List. If a majority is not present or the reviewers are unprepared, the moderator will reschedule the walkthrough and the meeting will be adjourned.

If a majority is present and the reviewers are prepared, the moderator will begin the meeting by introducing the product under review, then give a brief introduction of the walkthrough materials. Next, the moderator will proceed by stepping through the walkthrough materials (i.e., page by page, diagram by diagram, module by module, etc.) with the participants commenting on areas of concern. The moderator will also interject the comments of any reviewers not able to attend. The moderator will ensure that all decisions are made by the team, no one person dominates, feedback is provided for self-evaluation, and changes agreed to are documented.

If an issue or defect is found, the moderator will record it on the Defect/Issue List. Each defect or issue will be tracked by a unique number and identified as based on the categories described in Exhibit 5-4.

An alternative to logging each defect on the Defect/Issue List will be to redline the original review materials. When redlines are used, at least one defect/issue description will be logged for each separate document or unit (example comments: "see redlined master" or "see redlines").

The same walkthrough may be continued over more than one meeting by giving it a disposition of "Not Completed" and providing rationale. When all materials have been reviewed, the review team will agree upon the disposition of the walkthrough based upon the defects/issues recorded during the walkthrough (see Exhibit 5-5).

Date: _____

DEFECT/ISSUE LIST			
Issue Number	**Defect/Issue Category**	**Resolution**	**Comment**
	☐ Critical ☐ Minor ☐ Issue	_____ Resolved _____ Verified	
	☐ Critical ☐ Minor ☐ Issue	_____ Resolved _____ Verified	
	☐ Critical ☐ Minor ☐ Issue	_____ Resolved _____ Verified	
	☐ Critical ☐ Minor ☐ Issue	_____ Resolved _____ Verified	
	☐ Critical ☐ Minor ☐ Issue	_____ Resolved _____ Verified	
	☐ Critical ☐ Minor ☐ Issue	_____ Resolved _____ Verified	

DEFECT/ISSUE LIST

Exhibit 5-3

Categories of Defects/Issues	
1 Comment requires immediate resolution.	5. Comment has been resolved with developer.
2. Comment requires resolution to meet exit criteria.	6. Comment discussed with developer/still open.
3. Design quality or style suggestion.	7. Recommendation for future improvement.
4. Question about the document.	8. Typo, spelling, or minor wording changes.

DEFECT/ISSUE DEFINITIONS

Exhibit 5-4

WALKTHROUGH DISPOSITION				
Walkthrough Defect/Issue	**Walkthrough Disposition**			
	Accepted		Accepted With Modifications	
	Yes	No	Yes	No
Category 1 Defects				
Category 2 Defects				
Category 3 Defects				
Category 4 Defects				
Category 5 Defects				
Category 6 Defects				
Category 7 Defects				
Category 8 Defects				

WALKTHROUGH DISPOSITION

Exhibit 5-5

5.1.2.6 Resolving Defects/Issues

Critical defects have significant impact and their resolution requires a repetition of the walkthrough for those portions of the product affected. When the revision is complete, the moderator will schedule a new walkthrough.

The IV&V Team will resolve all minor defects and issues by incorporating solutions identified during the walkthrough. The Defect/Issue List will be completed to describe the resolution of each issue. The moderator will indicate that the defect or issue has been corrected by initialing the resolution field. The moderator will deliver the original review materials, Walkthrough Meeting Notice, Defect/Issue List, and the updated version of the materials to the IV&V Team for verification.

5.1.2.7 Verifying Defect/Issue Resolution

The moderator will verify that all minor defects have been corrected and all issues addressed, and will indicate compliance by initialing the Defect/Issue List. When redlines are used, the moderator will place a check mark by each redline to indicate that the item has been addressed. If there are defects which have not yet been resolved, or issues that need to be addressed, the moderator will return the materials to the author of the report for correction. This iterative cycle will continue until the moderator is satisfied that all necessary changes have been made to the review materials.

5.1.2.8 Completing the Walkthrough

Hours expended for a walkthrough may be calculated by summing all reviewers' preparation time, hours expended in walkthrough meetings, and the time spent by the moderator in resolution verification. This optional data will be entered in Block #8 of the Walkthrough Meeting Notice. The moderator will close a walkthrough by signing and dating Blocks #9 and #10, and returning the review materials to the author of the report.

5.1.2.9 Filing the Walkthrough Materials

Each completed walkthrough will be filed (paper or electronic) and will contain a copy of:

- The Walkthrough Meeting Notice
- Defect/Issue List
- All redlined review materials
- The final version of the product

5.2. IV&V Reporting Standards and Procedures

The following paragraphs describe the IV&V reporting standards and procedures, which include reporting requirements and timeframes necessary to provide to FSA the results of the IV&V Team's efforts. The IV&V Team will thoroughly document all IV&V efforts and inform the FSA Program Office (via the Federal Systems Integration Management Center (FEDSIM)) of their findings as the tasks are performed. Evaluations, comments, audit reports and white papers related to IV&V activities will be generated by the IV&V Team and communicated to the developer through the FSA Program Office. The IV&V Team will utilize checklists to monitor task performance and product delivery. Examples of the types of checklists that may be used are included in Appendix A of this IV&V Handbook. The IV&V Program Manager will closely monitor the accuracy and quality of all deliverables and IV&V results.

5.2.1 Reporting Overview

The IV&V Team will have a standard for the time required to review documents as well as to respond to comments. This time will be a function of the type of document (e.g., requirements, design, test) as well as the number of pages in the document, but is limited to no more than four weeks. However, as for major reviews, the IV&V Team may submit "quick look" comments as necessary. The IV&V Team will generate a "quick look" comment package that identifies significant issues that must be addressed at major reviews. In the four weeks following the review, the IV&V Team will perform a "full up" review and submit a coordinated comment package to the developer. These comments will be adjudicated over the next several months.

5.2.2 Reporting Templates

The IV&V reporting requirements are shown in Exhibit 5-6. The IV&V Team will utilize the reporting templates and matrices, along with the associated procedures to implement them, as described in the following paragraphs. These standards necessitate the use of reporting templates which are included within the text for readability, and templates are included in Appendix C for ease of use by the IV&V Team. Each template will be available in an electronic format for use by the IV&V Team.

5.2.2.1 IV&V Plan

The IV&V Team will prepare a tailored plan to address the IV&V activities for each target system under review. This will follow the IV&V Standards and Procedures and/or any other applicable guidance documents. This plan will be fairly brief and contain an introduction and a list of activities to be performed for each development phase. The tailoring will be based on the unique aspects of the target system but must follow FSA standards. The plan should be structured by phase and include key activities for each phase with target due dates.

IV&V REPORT	PHASES				
	Vision	Definition	Construction	Deployment	Support
IV&V Plan	•	•			
Completed Checklists	•	•	•	•	•
Technical Reports	•	•	•	•	•
Document Review Comments	•	•	•	•	•
Memorandum of Record	•	•	•	•	•
Audit Plan		•	•	•	
Audit Report		•	•	•	
Feasibility Assessment Report	•				
Requirements Verification Matrix		•	•	•	
Anomaly Report			•		
Risk Assessment Report	•	•	•	•	•
IV&V Test Procedures and Use Cases			•	•	
Test Report			•	•	
Special Studies Report	•	•	•	•	•
PRR Recommendation				•	
IV&V End of Phase Summary Report	•	•	•	•	
IV&V Final Report				•	
Progress Report	•	•	•	•	•
Trip Report	•	•	•	•	•
Issue Log	•	•	•	•	•

IV&V REPORTING REQUIREMENTS

Exhibit 5-6

The IV&V Plan will describe the following:

- Target system profile
- IV&V schedule
- IV&V Team organization
- Scope of the IV&V effort (Approach, Activities, Tailoring)
- Points of contact
- Key activities by phase
- Key deliverable due dates
- Tailoring of IV&V tasks and/or checklists based on project and/or scope

The IV&V schedule will be coordinated with the developer's project master schedule, and will be submitted in an FSA-specified format/medium so that IV&V schedules can be consolidated across all IV&V contractors. The IV&V Plan will be submitted no later than 30 days after the authorization to proceed.

5.2.2.2 Audit Plan

Audits will be performed when scheduled by the IV&V Team or when directed by FSA. The lead auditor will determine when to begin planning a scheduled audit. Planning will also begin when a client requests or directs that an audit be performed. The IV&V Team will provide the Audit Plan for review within 10 days of the scheduled audit. Audit personnel will be restricted to individuals who did not develop the product or perform the activity being evaluated and must not be responsible for either the product or the activity being evaluated. The lead auditor and the client will agree on the details of the evaluation such as:

- The scope of the audit and time frame for performing the audit activities, including the beginning and ending date(s)
- Knowledgeable points of contact within the audited organization who will be accessible during the audit
- Any resources required
- Sources for the criteria to be applied to the products or activities being evaluated

The audit client is the individual who requested or directed that the audit be performed or who has a direct interest in the findings. The lead auditor will be responsible for preparing the Audit Plan (shown in Exhibit 5-7). A sample audit plan is included in Appendix C. Data will be entered into the Audit Plan as follows:

- [Block #1] State the audit subject and objective.
- [Block #2] Fill in the project name (e.g., Portals, IFAP).
- [Block #3] Date the audit plan was prepared.
- [Block #4] The lead auditor is the "preparer."
- [Block #5] The FSA Program Manager, or designee, is the "reviewer" and must approve the audit plan.
- [Block #6] Enter the "client's" name leaving room for their approval.
- [Block #7] This can be any organizational descriptor that identifies an activity or product or may be a Computer Software Configuration Item.
- [Block #8] Date(s) scheduled for the audit. An audit may cover a period between program milestones (e.g., Critical Design Review to Test Readiness Review).
- [Block #9] Identify the lead auditor and fill in the names of the other auditors.
- [Block #10] Enter the designated points of contact in the audited organization.
- [Block #11] List resource requirements of which the auditee must be aware, such as required access to personnel, equipment, passwords, or reports.
- [Block #12] List the documentation from which the audit criteria are drawn. Sources often include the Software Development Plan, software procedures, and program manuals.
- [Block #13] Audit instructions contain the details of how the audit will be conducted, beginning with a statement of the purpose and specifying what will be examined and the criteria to be used. For all audit activities, describe the audit method through which adherence to the requirements is determined and include specifics, such as sample size. Review criteria will be specified for each element being evaluated. Instructions will be written in sufficient detail to allow another member of the IV&V Team to conduct the audit if needed.

The Audit Plan will be reviewed and approved by the FSA Program Manager. Next, the client will review and approve the audit plan. Upon approval, both signers will receive a copy. The lead auditor will also provide a copy of the approved plan to the audited organization in advance of the audit.

Attachments (i.e., checklists or data recording sheets) may be prepared and used to support audit execution and will be appended to the audit plan. Checklists will be used when conducting interviews to ensure that the same questions are asked of each person. The IV&V Team will maintain standard checklists which may be modified for some audits. Data recording sheets may range from informal handwritten notes to tailored forms.

The Audit Plan may be used in lieu of a checklist if it contains more product and/or process criteria than would be contained in a standard checklist.

<table>
<tr><th colspan="2">AUDIT PLAN</th></tr>
<tr><td rowspan="5">AUDIT SUBJECT/OBJECTIVE:
[1]</td><td>PROJECT:
[2]</td></tr>
<tr><td>PREPARED ON:
[3]</td></tr>
<tr><td>PREPARED BY:
[4]</td></tr>
<tr><td>REVIEWED BY:
[5]</td></tr>
<tr><td>APPROVED BY:
[6]</td></tr>
<tr><td colspan="2">GENERAL AUDIT INFORMATION</td></tr>
<tr><td>AUDITED ORGANIZATION:
[7]</td><td>AUDIT DATE(S):
[8]</td></tr>
<tr><td>AUDITOR(S):
[9]</td><td>AUDITED GROUP REPRESENTATIVE(S):
[10]</td></tr>
<tr><td colspan="2">RESOURCE REQUIREMENTS:
[11]</td></tr>
<tr><td colspan="2">AUDIT REFERENCES:
[12]</td></tr>
<tr><td colspan="2">AUDIT INSTRUCTIONS:
1. Instruction:
Method:
2. Instruction:
Method:
[13]</td></tr>
</table>

AUDIT PLAN

Exhibit 5-7

5.2.2.3 Completed Checklists

The IV&V Team will complete the appropriate checklist (as detailed in Sections 3 and 4) for each IV&V task. Completed checklists may be included as part of a Technical Report submitted for the specific IV&V task. Sample checklists are included in Appendices A through C of this IV&V Handbook.

5.2.2.4 Technical Reports

The IV&V Team will report on the individual IV&V phase tasks in a letter of findings (technical report) which will be issued as necessary. The technical reports may document interim results and status. The reports may be in a format appropriate for technical disclosure (for example, technical reports or memos). Reports will be generated for each technical task performed during the course of the IV&V program. Specific IV&V tasks are defined in Section 2.3. Security assessment tasks are defined in Section 4. Technical reports will be due no later than 30 days after completion of each reportable activity (for example, audits and product reviews).

Technical reports will be utilized to report on all formal concept, requirements, and design reviews. Technical reports will be utilized to report on test readiness reviews by providing recommendations relative to the start of testing. The IV&V Team will also provide a technical report relating to Production (Operational) Readiness Review and Post Implementation Review. In general, the technical reports will:

- List the evaluation participants and objective(s)
- Document detailed results and findings
- Detail the extent, cause, impacts, and frequency of any problems or negative trends detected
- Provide appropriate corrective action and/or preventive measure recommendations

5.2.2.5 Document Review Comments

The IV&V Team will prepare and submit document review comments in a letter of findings. For each document that requires review, the IV&V Team will submit a letter of findings within 30 days of document receipt. When dictated by schedule, “quick look” reviews will be performed to informally provide key comments as early as possible.

The process of document (or "product") inspection helps ensure that products of processes meet FSA requirements and that intended audiences obtain a quality perspective of those processes. Document inspections will be conducted in a systematic manner, beginning with the receipt of each document into the inspection (or review) process, continuing through the generation and coordination (among other IV&V Team personnel) of informal and formal comments and recommendations, and culminating in the verification of adequate disposition of these comments or recommendations. Checklists serve to normalize subjective evaluation by multiple reviewers.

Following an established order of inspection, coordination, and verification (as described in Section 3.2.1) will result in more thorough and efficient reviews of FSA documents and will provide an effective feedback mechanism regarding the evolution of, and insight into, the development, implementation, and deployment of the FSA target system. As discussed in Section 5.1.1, the IV&V Team will track completion and delivery dates for documents in accordance with schedules published by the FSA program office. The IV&V Team representatives will use these schedules to allocate time for inspection of system documents so that the necessary time to complete an inspection can be reflected in the IV&V Team schedule. The IV&V Team reviews will be completed and comments provided in a timely manner to support effective feedback.

The IV&V Team will use applicable government specifications and internally generated checklists to conduct document inspections. Checklists for content are tailored from the IV&V Standards and Procedures, Appendix A, while document style and format are checked against applicable pertinent sources, such as FSA procedures and FEDSIM Practices. Checklists will be tailored in accordance with any guidance provided by the program office or as directed by cover letters or memos accompanying the document to be inspected.

To begin the document inspection process, the IV&V Team will obtain a blank comment form (Exhibit 5-8) and provide any tailoring for the specific document. A template is provided in Appendix C. Comments will be provided in the following table format to facilitate a quick turnaround time for providing comments to the FSA. A Memorandum of Record (discussed in section 5.2.2.6) can also be used for distributing comments. Comments will provide the page number where the comment applies, including the section, figure or table. The comment text must provide enough information to stand alone without previous knowledge or additional information. Comment text will consist of the identification of any deficiencies in correctness, consistency, completeness, accuracy, and readability, as well as provide recommendations for corrections and/or improvements. Categories are provided to offer additional information as to the criticality of the comments, as well as the nature of the comments.

If necessary, comments may be provided one per page to ease delivery to appropriate individuals. The table itself may be electronically mailed, and the email should contain the document name and date, as well as a brief summary of the findings.

Document Identification (Title, Version, Date)						
Number	**Page**	**Paragraph**	**Table**	**Figure**	**Comment**	**Category**

Category
1. Comment requires immediate resolution.
2. Comment requires resolution to meet exit criteria.
3. Design quality or style suggestion.
4. Question about the document.
5. Comment has been resolved with developer.
6. Comment discussed with developer/still open.
7. Recommendation for future improvement.
8. Typo, spelling, or minor wording changes.

DOCUMENT REVIEW COMMENT FORM

Exhibit 5-8

5.2.2.6 Memorandum of Record (MOR)

The Memorandum of Record (Exhibit 5-9) is a formal memo format that can be used for meeting minutes, comments, and status reports, or to highlight a significant issue or milestone. It is easily tailored and provides a means of highlighting any concerns or issues that need to be brought to the attention of FSA Management. The memoranda are divided by type including customer satisfaction, design review, inspection/test results, process action team, and Other IV&V/QA.

Memorandum of Record (MOR)

General Information

From: IV&V Team **Date:** _____

To: FSA Representative **Project No.:** _____

Document: _____

Type of Memo:

☐ Customer Satisfaction
☐ Design Review
X Other – IV & V /QA
☐ Inspection/Test Results
☐ Process Action Team

Comments:

Cmt # 1- 'Comments with Page Number and Category

The following applicable categories include: (1) comment requires immediate resolution. (2) comment requires resolution to meet exit criteria, (3) design quality or style suggestion, (4) question about the document, (5) comment has been resolved with developer, (6) comment discussed with developer/still open, (7) recommendations for future improvement, and (8) typo, spelling, or minor word changes.

Distribution

1. _____ 2. _____
3. _____ 4. _____

Memorandum of Record

Exhibit 5-9

5.2.2.7 Audit Report

After completion of an audit, the IV&V Team will prepare an Audit Report. The Audit Report will be distributed within 10 days of audit completion. A copy will be filed with the associated Audit Plan and any supporting materials that were gathered during the audit. The FSA Program Manager will approve the Audit Report prior to its distribution.

Information should be entered into the Audit Report template shown in Exhibit 5-10 as follows:

- [Block #1] Actual date(s) of the audit.
- [Block #2] Identify the lead auditor and fill in the names of the other auditors.
- [Block #3 - Optional] The total effort expended on the audit may be broken out by planning and preparation time, audit performance, and reporting. Time to prepare the preliminary audit findings and conduct the debriefing may be included in the audit time.
- [Block #4] The narrative will include: the scope of the audit, the execution date(s), and a highlight of at least one significant finding. If there are no findings, that should be stated. Include a general statement describing the developer's performance improvement or decline since the previous audit or review. It is also appropriate to comment on well executed processes or outstanding products.
- [Block #5] Number each finding. A finding documents a discrepancy discovered during the current audit, or a previous one, and is classified as either major or minor. Findings cite, by reference, the requirement not being met, its severity compared to the results expected, and an explanation. A finding may be related to a failure in the process or to a failure to execute a plan or process, but the auditor does not attempt to make this determination. The cause will be determined during the corrective action process. Corrective actions will be referenced with the appropriate finding.
- [Block #6 - Optional] This block will include items of interest and/or observations made during the audit that do not qualify as a finding.
- [Block #7] The auditors sign the original report prior to its distribution.

AUDIT REPORT	
AUDIT INCLUSIVE DATES [1] :	AUDITORS [2] :
TOTAL EFFORT IN HOURS [3] : (optional)	
NARRATIVE [4] :	
MAJOR FINDINGS [5a] :	
MINOR FINDINGS [5b] :	
OBSERVATIONS [6] :	
AUDITOR SIGNATURES [7] :	

AUDIT REPORT

Exhibit 5-10

5.2.2.8 Feasibility Assessment Report

The IV&V Team may, at the option of the FSA Program Manager, prepare an independent Feasibility Assessment Report. This report will contain a detailed analysis of the IV&V Team's assessment of the alternatives including:

- Assessment methodology
- Alternatives with accompanying analysis
- Ranking of alternatives
- Recommendations with rationale
- Any risks that accompany the recommendations and alternatives

The Feasibility Assessment Report will be submitted within 30 days of the FSA request.

5.2.2.9 Requirements Verification Matrix

The IV&V Team will prepare a Requirements Verification Matrix (RVM), Exhibit 5-11, as a tool to verify that system requirements are in accordance with the IV&V standards outlined in Section 2. The RVM consists of the independent requirements database and a series of columns used to record traceability from requirements to design to software component to test case. The appropriate column(s) are added to the RVM as the development progresses from one phase to the next. The RVM will be in a spreadsheet or database format capable of producing the following report.

Rqmt #	Requirement	Design Reference	Comments	Component Ident	Test Reference	Comment

REQUIREMENTS VERIFICATION MATRIX

Exhibit 5-11

5.2.2.10 Anomaly Report

An Anomaly Report will be prepared and submitted to the FSA Program Manager for anomalies detected by the IV&V team. Anomaly Reports will be provided to FSA and the developer no later than 3 days after anomaly detection. Each Anomaly Report will contain the following information:

- Description and location
- Impact
- Cause (if known)
- Criticality
- Recommendations

The IV&V Team will perform statistical and qualitative analyses on any target system anomalies to identify and analyze trends indicative of systematic problems. Because the inception-to-implementation lifecycle may span several months, the IV&V Team will track the current status of system problems and deficiencies to assure the validity of any resultant changes. Anomalies will be categorized as to criticality and reported informally as part of the reviews and IPTs and formally as part of the status reports and deliverables. The IV&V Team may review corrective actions, verify priorities, and confirm the disposition of the change. The IV&V Team will utilize the Incident Report form provided in the FSA System Integration and Testing Approach

document for consistency with the developer. A copy of this template is provided in Appendix C.

5.2.2.11 Risk Assessment Report and Risk Watch List

The IV&V Team will provide a formal report documenting the results of the risk assessment described in the IV&V Standards and Procedures. This memorandum will contain a description of the risk assessment methodology, a description of the rankings, and a report of each risk with a recommended mitigation strategy. The risk assessment will be due no later than 10 days after completion of the assessment.

A Risk Watch list will be generated from the risk assessment and will be reviewed with the Development Program Managers. The Risk Watch List will be delivered bi-weekly and should be continually monitored by the IV&V Team. A detailed discussion of the risk management process and a sample Risk Watch List are included in Appendix B.

5.2.2.12 IV&V Test Procedures and Use Cases

The IV&V Team will prepare independent test cases that will include:

- The title of the test case
- Purpose
- Test Environment (specific setup needed for test)
- The analysis required of the results, if applicable
- Step-by-step instructions with expected results and requirement being satisfied

These procedures and use cases, Exhibit 5-12, will be provided sequentially throughout the Build and Test and Integration Test Phases in preparation for Acceptance Testing. A sample test procedure/use case is included in Appendix C.

Test Case Title/ID:					
Purpose:					
Environment:					
Analysis:					
Tester:		**Test Date:**		**Test Start Time:**	
Step	**Instruction**	**Expected Results**	**Source Reqt**	**Tester Comments**	**Comments**
Witnesses: _____					

TEST PROCEDURE/USE CASE

Exhibit 5-12

5.2.2.13 Test Report

The IV&V Team will monitor formal testing and submit reports within 15 days of each test completion. These reports will be used to document the IV&V witnessing of test activities including software installation, test setup, test execution, problem reporting, data recording, and data analysis.

As directed, the IV&V Team will witness developer testing for the purpose of verifying that the documented plans and procedures are executed properly and that the designated requirements were adequately tested. The IV&V Team will also analyze the objective evidence provided by the developer's test results. A Test Report will be prepared by the IV&V Team upon completion of the entire test activity. The report will contain an executive summary, overview of the test activity, a table showing the disposition of the requirements, a summary of the requirements testing results, and an optional section containing any lessons learned with recommendations. The report may contain the IV&V Team's recommendations that were provided during the test effort including the recommendation as to whether or not to proceed with the testing. During periods of compressed schedule, test results may be reported in the IV&V End of Phase Summary Report or the IV&V Final Report.

Following independent test execution, the IV&V Team will prepare an IV&V Test Report documenting the independent test results. The IV&V Test Report will be submitted within 15 days of test completion.

The following Test Report data will be included, at a minimum. A template is included in Appendix C.

Executive Summary - A short, high-level synopsis of the test activity; include the location(s), relevant dates, major groups who participated, and an overall conclusion of how successful the testing was in meeting the overall objectives.

Test Activities - Describe the results of the preparation activity; provide an overview of the test activity; and include a statement summarizing the results obtained.

Requirements Table - A table showing the disposition of the requirements (Exhibit 5-13).

Functional Area*	Satisfied	Not Tested	Not Satisfied	Total	% Satisfied
					%
					%
					%
Miscellaneous (Including Inspection Test Cases)					%
Total					%

* Functional Area designations included in this table are used for reference only. Functional Area is dependent upon the actual test activity and the specific requirements that are to be validated.

REQUIREMENTS DISPOSITION

Exhibit 5-13

Test Analysis - Summarize the results of the requirements testing; any significant problems encountered and their cause(s), if known; solutions which were incorporated; action plans agreed to; proposed recommendations; an overall conclusion on the level of accomplishment of the core test objectives; and any additional observations on how the testing was conducted.

Lessons Learned - This section of the report may include both positive and negative lessons learned during the test effort. Positive lessons learned will be written in enough detail to provide a clear understanding of the immediate and the long term benefit realized by the program and also clearly describe how this was achieved so it will be easily understood and adopted for future use. For problems encountered, include a statement of the deficiency; cause, if determined; action(s) taken or planned; and a recommendation to prevent future occurrences.

5.2.2.14 Special Studies Report

As required, the IV&V Team will conduct and report on technical, cost, and schedule trade-off analyses related to system development (for example, changes in standards or technology). These efforts are specifically identified and approved by FSA prior to commencement. This may take the form of a formal memorandum or be done using the Special Studies Report Template in Appendix C. The study will describe the purpose, how it was performed (Approach), findings, and summary of results. The results of the study will be provided within 10 days after its completion. The report will document technical results and will include, at a minimum, the following information:

- Purpose and objectives

- Approach
- Findings
- Summary of results

5.2.2.15 IV&V End of Phase Summary Report

The IV&V Team will prepare and submit an IV&V End of Phase Summary Report for each life cycle phase to include the following information:

- Description of IV&V tasks performed
- Assessment of overall system/software quality
- Recommendations to proceed to next phase
- Lessons learned

The End of Phase Summary Report is a living document which will identify all activities performed by the IV&V Team during the phase just completed. The document will be issued each time a developer completes a phase. The previously published information will be updated and the risk area will be reassessed. An update summary of the previous phase will be provided when the subsequent summary report is issued. A template for the End of Phase Report is included in Appendix C.

An End of Phase Summary Report will be provided at the conclusion of each of the following phases:

- Vision Phase
- Definition Phase
- Construction Phase
- Deployment Phase
- Support Phase

For the Deployment Phase, this report will be the IV&V Final Report. Support phase activities will be reported using Memorandum of Record and comment forms. The End of Phase Summary Report will be formally structured and include the following elements:

Executive Summary - This paragraph will provide a brief statement of the IV&V Team activity results from the previous phases. An overview of the activities for this phase, a summary of the results of this phase, and an evaluation of phase completion will be provided.

Introduction - This section will identify the target system (e.g., FSA system name) and the phase just completed where this report applies. It will include the purpose, scope, and expected results of this report on the program. The scope will identify the specific topics to be covered in the report, and any exclusions will be specifically identified.

Phase Activities and Assessments - This section will be divided into paragraphs to identify each activity performed by the IV&V Team relating to the identified system during this phase, methodology used in the performance of the identified activities, a summary of results for each activity, and any recommendations that are related to issues that have not been resolved satisfactorily during the phase. All recommendations must provide a rationale.

Overall Phase Assessment - This section will provide an overall assessment of the system. These overall assessments will include overall anomalies and resolutions, system metrics and risks to the program.

Conclusions and Recommendations - This section will provide an overall statement of FSA system status. Overall conclusions drawn for the phase will be provided along with lessons learned. Any recommendations for corrective action or improvement will be justified.

Lessons Learned - This section will provide lessons learned during the development phase.

5.2.2.16 Production Readiness Review Recommendation

IV&V should encourage a Pre-Production Readiness Review where all outstanding issues can be addressed prior to PRR. A sample template is included in Appendix C. At least one full day prior to PRR, IV&V must provide the ECAD QA Lead a Technical Report or email which includes the following:

- List of outstanding issues
- Risks relevant to PRR
- Recommendation for PRR
- All contingencies that impact the recommendation

5.2.2.17 IV&V Final Report

The IV&V Final Report will be issued at the end of the System Deployment Phase or at the conclusion of the IV&V effort. The IV&V team will prepare and submit a final report addressing the following items:

- Summary of all life cycle IV&V tasks
- Assessment of overall system quality
- Recommendations
- Lessons learned

This formal report will follow almost the same format as the End of Phase report, the major difference being that the Final Report will discuss issues from the entire development lifecycle, while the End of Phase report specifically addresses one phase of the development effort.

5.2.2.18 Progress Report

The IV&V Team will provide a summary of all IV&V activities performed for the program. The IV&V Team lead will compile IV&V Team personnel status information and generate a report (Exhibit 5-16). This report will summarize all IV&V activities for the target system, including both formal and informal deliverables. This report should be tailored for the IV&V effort and may also take the form of weekly status reports (Exhibit 5-15). The report will include:

- Accomplishments for this period
- Scheduled Tasks for next period
- Meetings for the previous week and upcoming meetings
- Recommended FSA actions
- Preliminary issues
- Issue log of outstanding issues for monitoring purposes

The issue log (Exhibit 5-14) is a means of capturing and tracking all issues reported in the weekly status report. Rather than reporting the same issues on a weekly basis, the IV&V team will keep a cumulative log of all outstanding issues and review them with the development team. Priority should match the developer definitions for each project for consistency. Typically, priority one is a critical issue, two is a medium range concern, and three is a minor issue. This can be tailored for the project. Status would be open or closed, and resolution should state why it was closed.

Issue Number	Date	Issue Description	Priority	Status	Resolution

Weekly Issue Log

Exhibit 5-14

WEEKLY STATUS REPORT
Contract Title:
Contract ID and Order Number:
Period Ending:

1. ACCOMPLISHMENTS - THIS PERIOD	2. SCHEDULED TASKS - NEXT PERIOD
• • • •	• • • •
3. MEETINGS & COMMUNICATIONS	**4. UPCOMING MEETINGS & COMMUNICATIONS**
• • • •	• • • •
5. RECOMMENDED FSA ACTIONS	**6. PRELIMINARY ISSUES**
1.	**1.**

Weekly Status Report

Exhibit 5-15

A template for this and other status reports is included in Appendix C. If a monthly report is preferred by the QA lead, the following sections must be included:

Section One **-** The IV&V Team Executive Summary section provides a summary of IV&V activities and will be no longer than one page. A paragraph at the end of the summary outlines key activities planned for the next month.

Section Two - The Deliverables section provides a table of all the deliverables made during the month under review (separate table for each contract CLIN). For multiple CLINs or task orders, a separate table can be prepared for each, or a column can be added identifying the task number. This section also includes meeting and phonecon dates for the reported month.

This section will also address any concerns, outstanding issues, or risks to the program identified by the IV&V Team.

DELIVERABLE	PLANNED DELIVERY	ACTUAL DELIVERY	STATUS AS OF END OF PERIOD

MEETING/ PHONECON	DATE	COMMENTS

SAMPLE PROGRESS REPORT

Exhibit 5-16

5.2.2.19 Trip Report

The IV&V Team will prepare and submit formal trip reports to the FSA Program Manager for each trip in support of FSA. Trip Reports will be due no later than 10 days after return from the scheduled trip. These reports may be in the form of informal memoranda or can be delivered via electronic mail and then followed up with a formal delivery. A template is included in Appendix A. The memo must contain:

- Purpose of trip
- Location of trip
- Dates of travel
- Personnel traveling
- Summary

- Findings
- Actions/Issues

- Lessons learned (if applicable)

5.3 Security Reporting Standards and Procedures

The format, content and templates for reports to be prepared in support of Section Four, Security Effectiveness Evaluations, are contained in the body of Section Four, and the appropriate Appendices referenced in that section. These functions are separate from traditional IV&V and have their own reporting mechanisms, which are more easily presented in the context of Section Four and Appendices D-H.

Appendix C

IV&V REPORTING TEMPLATE

APPENDIX C. REPORTING TEMPLATES

The following templates are provided for use in IV&V task reporting in order of appearance in Section 5:

- Document Review Schedule
- Document Tracking System Template
- Walkthrough Meeting Notice
- Walkthrough Log
- Defect/Issue Log
- Walkthrough Disposition
- IV&V Plan
- Audit Plan
- Technical Report
- Document Review Comment Form
- Memorandum of Record
- Audit Report
- Feasibility Assessment
- Requirements Verification Matrix
- Anomaly Report Form
- Test Procedure/Use Case
- Test Report & Requirements Disposition
- Special Studies Report
- End of Phase Summary Report
- PRR Recommendation
- IV&V Final Report
- Sample Progress Report
- Weekly Status Report & Issue Log
- Trip Report

DOCUMENT REVIEW SCHEDULE

Document Name	Version of Document	Date Document Received	Primary Reviewer (Initials)	Internal Walkthrough Date	Comment Due Date	Actual Comment Delivery Date	Comment Resolution

DOCUMENT TRACKING SYSTEM

Name	Version/ Tracking #	Primary Author	Date Received	Reviewer	Walk-through Date	Due Date	Delivery Date	Resolution & Date

WALKTHROUGH MEETING NOTICE	
Product/IV&V Control Number:	**Walkthrough Number:** **Date:** **Time:** **Place:**
Author(s):	
Reason for Walkthrough: ☐ New Development ☐ Change in Response to Problem Report ☐ Other (Specify): _____ ☐ Cross Referenced to: _____	
Review Team: **Moderator:**	**Moderator:** Indicate who is present; note substitutes; mark-ups.
Note: **If you are unable to attend the walkthrough, please review the handout materials and if you have any comments return them to the moderator prior to the walkthrough so they can be considered.** **Walkthrough Disposition:** ☐ Accepted ☐ Accepted With Modifications ☐ Not Accepted (Explain):	
Effort Expended:	
Moderator's Signature:	**Date:**

WALKTHROUGH LOG					
Walkthrough Number	**Product**	**Author**	**Moderator**	**Walkthrough Date**	**Closure Date**

Date of Review:_____
Walkthrough Number:_____

DEFECT/ISSUE LIST			
Issue Number	**Defect Category (1-8)**	**Resolution**	**Comment (Include Reviewer Initials)**
		_____ Resolved _____ Verified	
		_____ Resolved _____ Verified	
		_____ Resolved _____ Verified	
		_____ Resolved _____ Verified	
		_____ Resolved _____ Verified	

Category

1. Comment requires immediate resolution.
2. Comment requires resolution to meet exit criteria.
3. Design quality or style suggestion.
4. Question about the document.
5. Comment has been resolved with developer.
6. Comment discussed with developer/still open.
7. Recommendation for future improvement.
8. Typo, spelling, or minor wording changes.

WALKTHROUGH DISPOSITION				
Walkthrough Defect/Issue	**Walkthrough Disposition**			
	Accepted		Accepted With Modifications	
	Yes	No	Yes	No
Critical Defect(s) Recorded				
Minor Defect(s) Recorded				
Issue(s) Recorded				

IV&V PLAN

Target system profile:
IV&V schedule:
IV&V Team organization:
Scope of the IV&V effort: Approach Activities Tailoring

AUDIT PLAN	
AUDIT SUBJECT/OBJECTIVE:	PROJECT:
	PREPARED ON (Date):
	PREPARED BY:
	REVIEWED BY:
	APPROVED BY:
GENERAL AUDIT INFORMATION	
AUDITED ORGANIZATION:	AUDIT DATE(S):
AUDITOR(S):	AUDITED GROUP REPRESENTATIVE(S):
RESOURCE REQUIREMENTS:	
AUDIT REFERENCES:	
AUDIT INSTRUCTIONS: 1. Instruction: Method: 2. Instruction: Method:	

TECHNICAL REPORT

Technical reports will be utilized to report on all formal concept, requirements, and design reviews. Technical reports will be utilized to report on test readiness reviews by providing recommendations relative to the start of testing. The IV&V Team will also provide a technical report relating to Production (Operational) Readiness Review and Post Implementation Review. Technical reports should be tailored based on the activity and may take the form of an MOR or simply a formal email.

List the evaluation participants and objective(s).

Detailed Results and Findings.

Detail the extent, cause, impacts, and frequency of any problems or negative trends detected.

Provide appropriate corrective action and/or preventive measure recommendations.

DOCUMENT REVIEW COMMENT FORM

Reviewer: Date:

Document Identification (Title, Version, Date)						
Number	**Page**	**Paragraph**	**Table**	**Figure**	**Comment**	**Category**

Category

1. Comment requires immediate resolution.
2. Comment requires resolution to meet exit criteria.
3. Design quality or style suggestion.
4. Question about the document.
5. Comment has been resolved with developer.
6. Comment discussed with developer/still open.
7. Recommendation for future improvement.
8. Typo, spelling, or minor wording changes.

Memorandum of Record (MOR)

General Information

From: IV&V Team **Date:** _____

To: FSA Representative **Project No.:** _____

Document: _____

Type of Memo:

☐ Customer Satisfaction
☐ Design Review
X Other – IV & V /QA
☐ Inspection/Test Results
☐ Process Action Team

Comments:

Cmt # 1- 'Comments with Page Number and Category

The following applicable categories include: (1) comment requires immediate resolution. (2) comment requires resolution to meet exit criteria, (3) design quality or style suggestion, (4) questions about the document, (5) Comment has been resolved with developer, (6) Comment discussed with developer/still open, (7) recommendations for future improvement, and (8) typo, spelling, or minor word changes.

Distribution

1. _____ 2. _____
3. _____ 4. _____

AUDIT REPORT	
AUDIT INCLUSIVE DATES :	AUDITORS:
TOTAL EFFORT IN HOURS: Preparation ( ) + Audit ( ) + Report ( ) = ( ). (optional)	
NARRATIVE:	
MAJOR FINDINGS:	
MINOR FINDINGS:	
OBSERVATIONS:	
AUDITOR SIGNATURES:	

FEASIBILITY ASSESSMENT REPORT
Assessment methodology:
Alternatives with accompanying analysis:
Ranking of alternatives:
Recommendations with rationale:
Risks that accompany the recommendations and alternatives:

REQUIREMENTS VERIFICATION MATRIX

Reviewer: Date:

Rqmt #	Requirement	Design Reference	Comments	Component ID	Test Reference	Comments

ANOMALY REPORT FORM

Incident Number:

Incident Priority:

Reported by:

Date Reported:

Application:

Script no:

Cycle no:

Testing Phase:

Incident Reason:

Brief Description:

Long Description:

Assigned to:

Date Assigned:

Resolution:

Resolved by:

Date Resolved:

Retested by:

Date Retested:

Approved by:

TEST PROCEDURE/USE CASE

Test Case Title/ID:					
Purpose:					
Environment:					
Analysis:					
Tester:		**Test Date:**		**Test Start Time:**	
Step	**Instruction**	**Expected Results**	**Source Reqt**	**Tester Comments**	**FQT Comments**
Witnesses: _____					

TEST REPORT & REQUIREMENTS DISPOSITION

Executive Summary - A short, high-level synopsis of the test activity; include the location(s); relevant dates; major groups who participated; and an overall conclusion of how successful the testing was in meeting the overall objectives.

Test Activities - Describe the results of the preparation activity; an overview of the test activity; and include a statement summarizing the results obtained.

Requirements Table - A table showing the disposition of the requirements as follows.

Functional Area*	Satisfied	Not Tested	Not Satisfied	Total	% Satisfied
Total					

* Functional Area designations included in this table are used for reference only. Functional Area is dependent upon the actual test activity and the specific requirements that are to be validated.

Test Analysis - Summarize the results of the requirements testing; any significant problems encountered and their cause(s), if known; solutions which were incorporated; action plans agreed to; proposed recommendations; an overall conclusion on the level of accomplishment of the core test objectives; and any additional observations on how the testing was conducted.

Lessons Learned - This section of the report may include both positive and negative lessons learned during the test effort. Positive lessons learned will be written in enough detail to provide a clear understanding of the immediate and the long term benefit realized by the program and also clearly describe how this was achieved so it will be easily understood and adopted for future use. For problems encountered, include a statement of the deficiency; cause, if determined; action(s) taken or planned; and a recommendation to prevent future occurrences.

SPECIAL STUDIES REPORT

1.0 Purpose and objectives
2.0 Approach
3.0 Summary of results

IV&V END OF PHASE SUMMARY REPORT

Description of IV&V tasks performed
Assessment of overall system/software quality
Recommendations to proceed to next phase
Lessons learned

PRODUCTION READINESS REVIEW RECOMMENDATION

List of outstanding issues:

Risks relevant to PRR:

Recommendation for PRR:

All contingencies that impact the recommendation:

IV&V FINAL REPORT
1.0 INTRODUCTION
2.0 STANDARDS AND PROCEDURES
3.0 SUMMARY OF LIFE CYCLE IV&V TASKS
4.0 LESSONS LEARNED
4.1 SUMMARY OF IV&V PROJECT LESSONS LEARNED AND RECOMMENDATIONS
4.1.1 Product Issues
4.1.2 Process Issues
4.2 DETAILED LESSONS LEARNED
4.2.1 Lessons Learned (Processes to be corrected)
4.2.1.1 Product Issues
Issue:
Recommendation:
4.2.1.2 Process Issues
Issue:
Recommendation:
4.2.2 Positive Lessons Learned (Processes to be maintained)

SAMPLE PROGRESS REPORT

Project Name:

IV&V Program Manager/Phone:

Reporting Period:

Executive Summary

Deliverable and Meeting Status

DELIVERABLE	PLANNED DELIVERY	ACTUAL DELIVERY	STATUS AS OF END OF PERIOD

MEETING/ PHONECON	DATE	COMMENTS

Problems/Concerns/Risks

1.
2.
3.
4.
5.
6.
7.

WEEKLY STATUS REPORT

Contract Title
Contract ID and Order number
Period Ending:

1. ACCOMPLISHMENTS - THIS PERIOD	2. SCHEDULED TASKS – NEXT PERIOD
• • • •	• • • •
3. MEETINGS & COMMUNICATIONS	**4. UPCOMING MEETINGS & COMMUNICATIONS**
• • • •	• • • • .
5. RECOMMENDED FSA ACTIONS	**6. PRELIMINARY ISSUES**
1.	1.

Point of Contact Information is listed at the bottom of the report.

ISSUE LOG

Issue Number	Date	Issue Description	Priority	Status	Resolution

TRIP REPORT

Name of Person(s) traveling:
Dates of travel:
Location of trip:
Purpose of trip:
Summary of Trip:
Findings:
Actions/Issues From Trip: 1. 2.
Lessons learned (if applicable): 1. 2.